

The following Listing of Claims will replace all prior versions, and listings, of claims in the application.

LISTING OF CLAIMS:

1. (Currently Amended) A surface roughening method, comprising:

moving a cutting tool along a longitudinal axis of an article, wherein the cutting tool comprises a radial cutting head, and wherein the radial cutting head comprises a cutting blade with a leading edge and a trailing edge;

rotating the cutting tool along the longitudinal axis such that the leading edge of the cutting blade forms a first pattern of peaks and valleys on a surface of the article; and

applying and~~applying~~ stress to the peaks in the first pattern with the trailing edge of the cutting blade to create fracture surfaces and form a second pattern, wherein the second pattern comprises lands at the fracture surfaces separated by grooves, wherein the grooves in the second pattern correspond to the valleys in the first pattern, and wherein

a first line drawn along a first wall of the grooves in the second pattern, and a second line drawn along a second wall of the grooves in the second pattern form an acute angle, and wherein a bisector of the acute angle lies above a line drawn normal to the surface of the article.

2. (Original) The method of claim 1, wherein

an entire cross section of each peak along the longitudinal axis of the article is fractured by applying the stress to each peak in a non-axial direction.

3. (Original) The method of claim 1, wherein
each of the grooves in the second pattern is asymmetrical.
4. (Original) The method of claim 1, wherein
the leading edge of the cutting blade further comprises a second cutting edge, and
wherein the second cutting edge forms at least one concave region in each valley of the first
pattern, and wherein each concave region corresponds to a notch in the second wall of each
of the grooves in the second pattern.
5. (Original) The method of claim 1, wherein
the trailing edge of the cutting head further roughens each of the fracture surfaces to
form roughened lands in the second pattern.
6. (Original) The method of claim 1, wherein
the article defines a cylindrical body.
7. (Original) The method of claim 6, wherein
the cylindrical body comprises an interior surface of the article.
8. (Original) The method of claim 7, wherein
the first pattern comprises a substantially helical pattern of peaks and valleys, and
wherein the second pattern comprises a substantially helical pattern of lands and grooves.

9. (Original) The method of claim 1, wherein
the article comprises a nonferrous metal.
10. (Original) The method of claim 1, further comprising
applying a coating overlaying the first and second patterns on the surface of the
article.
11. (Original) The method of claim 10, wherein
applying the coating comprises at least one of chemical vapor deposition, plasma
deposition, thermal spray coating, or fluid spray coating.
12. (Original) The method of claim 10, wherein
the coating comprises an abrasion resistant material.
13. (Original) The method of claim 10, wherein
the coating comprises at least one of a ceramic material or a ferrous metal.
14. (Original) The method of claim 13, wherein
the ceramic material comprises one or more of silicon nitride, silicon carbide,
aluminum oxide, silicon dioxide, and titanium nitride.
15. (Original) The method of claim 13, wherein
the ferrous metal comprises one or more of titanium, tungsten, cobalt, nickel, iron,
and aluminum.

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Claims 16-44 (Cancelled)